

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD

**PROPOSED REVISIONS TO
CALIFORNIA'S AGRICULTURAL BURNING GUIDELINES**

Introduction

The Air Resources Board's (ARB or Board) Agricultural Burning Guidelines were established in 1970 in response to Statewide legislation that recognized the need to reduce the harmful health effects from unrestrained open burning on public and private lands.

In place for almost 30 years, these Agricultural Burning Guidelines have been largely successful in achieving cost-effective, significant reductions in smoke impacts from burning used in agricultural and grazing operations. The accomplishments of this program are attributable to the close coordination and productive working relationships between State and local air agencies and California's private and commercial landowners, farmers, and ranchers.

Despite these accomplishments, the ARB in 1998 called for a re-examination of the State's Agricultural Burning Guidelines to address new challenges brought about by recent changes in federal lands policies and air quality requirements. On the one hand, these federal actions will increase the amount of prescribed burning on federal lands, creating the potential for adverse health impacts on surrounding communities.

On the other hand, federal health-based air quality standards and regional haze rules impose new requirements on states to reduce overall levels of smoke-related emissions associated with open burning.

In addition to these challenges, the accumulation of biomass in urban, wildland, rangeland, and forest regions is a major natural resource issue in California because of the direct effect it has on wildfire and the associated damage caused to structures, the environment, and public health. The challenge before both air regulators and land managers is how to thin forests and reduce fuel loadings that have accumulated since the advent of fire suppression at the turn of the century while protecting public health from associated smoke-related emissions.

In response to these challenges and to facilitate stronger partnerships among regulators and the agricultural and forest burning communities, we are proposing to revise the Agricultural Burning Guidelines. These changes include modifying the title to "Smoke Management Guidelines," (Guidelines) to more clearly reflect the purpose of the regulation.

The proposed changes are designed to enhance the State's existing smoke management program by emphasizing greater air district accountability and collaboration with its stakeholders to protect air quality and public health from agricultural burning, including prescribed burning.

In developing these changes, we have used a broad-based public outreach program to establish a more comprehensive Statewide approach to smoke management. This outreach consisted of numerous program scoping sessions, public workshops, and individual stakeholder meetings.

These changes were tailored after the successful approach used in the Sacramento Valley, where nine air districts formed a region to coordinate the effective management of agricultural burning operations, as well as programs implemented in the Mountain Counties and air basins in the Northeast portion of the State that work with commercial timber interests and public lands managers.

Overview of the Proposed State Smoke Management Guidelines

The following questions and answers provide a brief overview of the basis and rationale for the proposed Guidelines.

What is agricultural burning?

Section 41850 of the California Health and Safety Code requires the reasonable regulation of agricultural burning in order to reduce the public health and environmental impacts of smoke. Agricultural burning refers to the intentional use of fire for vegetation management, disease and pest prevention, and range improvement – in areas such as agricultural fields, orchards, and wildlands like rangeland and forests. The planned use of fire on wildlands and grazing lands is generally referred to as “prescribed” burning.

What is the distinction between the terms “agricultural burning” and “prescribed burning”?

Section 39011 of the California Health and Safety Code defines agricultural burning as a variety of activities that involve the open burning from agricultural operations in the growing of crops and orchards, the raising of fowl or animals, and disease and pest prevention.

Agricultural burning includes prescribed burning which consists of any fire intentionally ignited to meet specific land management objectives (i.e., to reduce flammable fuels, such as the accumulation of brush, logs, etc. on forest floors; or to help restore ecosystem health). Prescribed burns are conducted only under certain weather conditions (i.e., during periods of low wind) when flame length and heat can be controlled. Land managers must obtain approval of prescribed fire plans from applicable federal or State agencies before conducting prescribed burns. In addition, before federal land management activities (i.e., trail building, timber harvesting, use of

fire, etc.) are conducted, the environmental impacts of these activities must be analyzed to assess their impacts on cultural resources, wetlands, soil, water quality, air quality, visibility, and other resources.

What role do ARB's Agricultural Burning Guidelines play in smoke abatement?

The Board established Statewide guidelines in 1970 for regulating and minimizing the smoke related impacts of open outdoor fires used in agricultural operations in the growing of crops or raising of fowl or animals, forest management, and range improvement. The goals of these guidelines were to mitigate the nuisance and public health impacts posed by smoke intrusion into populated areas by providing direction and operating procedures for open burning. As part of this process, we have program oversight authority to declare burn and no-burn days for each region or air basin in the State. Air pollution control and air quality management districts (local air districts) incorporate these guidelines into their local programs and work with local farmers, private landowners, and public lands managers to ensure that open burning is conducted within prescribed limits and on days that are conducive to good atmospheric dispersion and minimal air quality impacts.

What's the correlation between smoke from agricultural burning and exceedances of State and federal ambient air quality standards for particulate matter?

Particulate matter is a complex mix of pollutants such as smoke, dust, nitrates, sulfates, and metals. Particles can be directly emitted from sources like vehicles, fires, and dust from roads or can be formed in the atmosphere by the reaction of chemical precursors, like oxides of nitrogen and ammonia. Combustion processes, such as agricultural and prescribed burning, generally form fine particles, while mechanically formed particles such as dust tend to be larger.

The season for high particle levels and the dominant pollution sources vary across the State. In much of northern and central California, levels of both fine particulate matter and PM10 are lower in spring and summer, higher in fall and winter.

Air quality in California is improving. PM10 levels have been declining in the last decade. Despite this improvement, California still has a long way to go to achieve all of its clean air goals. In fact, 14 of California's 15 air basins continue to violate the State PM10 standards. While PM10 levels in the Sacramento Valley meet the annual State PM10 standard, the region continues to violate the 24-hour State PM10 standard by a considerable amount. The new federal air quality standards for fine particles less than 2.5 microns in diameter (PM2.5) will focus additional attention on the need to reduce emissions of particulate matter and particulate matter precursors.

Smoke from planned or unplanned fires can sometimes result in short-term (several hour) episodes of high particle levels. In many cases, these episodes do not cause violations of the 24-hour particulate matter standards because the elevated particle

levels last only a few hours. Although these short-term episodes may not trigger violations of particulate matter air quality standards, they are nonetheless a public health concern. Through more effective smoke management practices, we hope to minimize the public health impacts of these short-term episodes.

Why are we proposing to revise the Agricultural Burning Guidelines?

We are proposing to revise the Agricultural Burning Guidelines to achieve the following objectives:

- Minimize or prevent smoke impacts to protect public health, public safety, and visibility.
- Establish a more consistent Statewide approach to smoke management, building upon the experience of nearly 30 years of regulating agricultural burning.
- Reduce smoke impacts to provide for increased burning on federal lands.
- Encourage the development and use of alternative methods to prescribed burning for disposing of, or reducing, the amount of forest fuels on public lands.

What are the key features of the proposed Smoke Management Guidelines?

The key features of the proposed Guidelines are listed below:

1. Add smoke management program requirements that consolidate all agricultural burning elements of the existing guidelines under one umbrella program at the district or regional level.

These program requirements establish a systems-based approach to smoke management that integrates health-based requirements into the mix of considerations that burners must take into account in their burn plans.

In addition, incorporation of a smoke management program component into the guidelines is intended to foster a more collaborative approach among State agencies and local air districts, farmers, foresters, and land managers. Recent smoke episodes that have occurred over the past several years on public lands might have been minimized and public confusion and anger reduced through a more concerted effort to consult with air agencies and notify the public. While the Guidelines alone will not solve this problem, it will serve as the catalyst to bring about a more effective partnership.

2. Specify prescribed burning thresholds that are tailored to different tiers of complexity, duration, and potential severity of smoke impacts.

The proposed amendments call for the delineation of burn thresholds that are intended to reduce unnecessary requirements for those burn events that pose negligible smoke

impacts, while marshalling the necessary resources for those burn projects that pose the greatest potential threat to health, safety, or property. Threshold requirements range from providing information to local air districts and affected communities on the location and duration of the burn, to specifying contingency actions and monitoring smoke plumes.

3. Provide greater emphasis on preventing or reducing smoke to sensitive populations.

In order to reduce the increasing threat of catastrophic wildfires on public lands, federal land managers have developed long-range plans that call for increases in prescribed burning over the next several decades. However, increased human habitation in the urban/wildland interface areas has occurred over the past 30 years. This makes unrestrained burning more problematic than ever before. For this reason, the Guidelines are being revised to require foresters and federal land managers to give greater consideration to non-burn alternatives when there is a potential for adverse impacts to communities.

4. Use improved meteorological data and tracking techniques to accommodate necessary increases in prescribed burning.

The proposed amendments include several new features that can be used to accommodate the burning of additional acres while posing no additional threat to the impacted public. These features include: (i) the designation of marginal burn days when weather patterns are marginal so as to allow small amounts of burning or smoke where impacts are negligible; (ii) the ability to develop alternative meteorological criteria that create additional sub-regions with different weather patterns within air basins; and (iii) application of an interactive computer-based system to track prescribed fires in the State.

5. Increase consideration of alternative non-burn treatments to prescribed burning.

We have added a provision in the proposed amendments to explicitly require consideration of alternatives to burning. If a burn project is greater than 100 acres in size or estimated to produce more than 10 tons of particulate matter, and if it is accessible within 50 miles of a biomass processing facility, the smoke management plan must contain an evaluation of alternatives to burning that were considered.

We recognize that part of the solution to improving ecosystems and vegetation in our national lands requires the reintroduction of fire. In fact, decades of fire suppression has led to negative consequences for forest health, dangerous fuel buildup, reduction in biological diversity, and increased incidence of insect and disease activity.

Nevertheless, while perhaps less costly in the short term, prescribed burning must be part of an integrated system for vegetation management and forest health that not only considers the public benefits of burn projects, including safety, forest health and wildfire prevention and ecological needs, but also the needs of public health protection. Such an integrated system should include consideration of alternate treatments to burning

when economically possible and ecologically desirable. Alternative methods can include such treatments as selective understory thinning, chipping, and mulching, bioconversion for energy generation, animal grazing and to a lesser extent, chemical treatments. These treatments can be employed either in the pre-treatment phase, or also as a primary treatment, particularly around urban interface areas and major transportation routes.

What changes in federal fire management policies and air quality requirements are occurring that need to be addressed through the State smoke management program?

In 1995, responding to the unhealthy condition of federal public wildlands, and the increase in catastrophic wildfires in the West, five federal agencies (the U.S. Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and the Fish and Wildlife Service) agreed to change their management policies. The goals of these policies are to reduce unnatural fuel densities that contribute to increasing unplanned fire hazards and to restore wildland ecosystems to their healthy natural states.

At about the same time, the United States Environmental Protection Agency (U.S. EPA) promulgated health-based air quality standards for particulate matter. These fine airborne particles, when inhaled, can adversely affect health. Tests indicate that, on average, 90% of smoke particles from wildland and prescribed fires are inhalable and pose a health risk. Although not all smoke episodes will trigger violations of federal standards for particulate matter, they nonetheless pose a public health concern.

The U.S. EPA has also recently promulgated regional haze requirements that require improvement of natural visibility in areas of great scenic importance in our national parks and monuments. Many of these natural vistas are impaired by manmade sources of pollution. However, we expect an additional burden will be imposed by prescribed burning. Some of these increases could be offset through the measured use of non-burn alternatives, particularly in those areas more readily accessible from roads and potentially creating adverse impacts to smoke sensitive populations in the urban/wildland interface areas.

Tighter standards and the expectation of increased burning on federal lands require the State to take a more aggressive role on managing the smoke impacts on public health. Although not all smoke episodes will trigger violations of these federal standards, they nonetheless pose a public health concern. Through a more effective smoke management program, we hope to minimize the public health impacts of these episodes.

What can be done to minimize adverse impacts of smoke on public health and the environment in light of long-term increases in prescribed burning?

Despite anticipated increases in prescribed fire, clean air and public health goals can be met. However, careful planning and cooperation among land managers, air quality regulators, and local communities are needed.

The proposed Guidelines encourage the use of best management practices and operations that will meet management goals with the most favorable environmental impacts at the least cost. These techniques include scheduling burning during favorable weather conditions that allow for good smoke dispersal, limiting the amount of land burned at one time, and the mechanical pre-treatment of fuels such as chipping, selective logging, thinning and pruning, especially along the urban/wildland interface areas and major transportation routes.

Who will be affected by the proposed changes to the Guidelines?

Persons authorized to ignite fires under State and local air district smoke management regulations must comply with all applicable local, State and federal requirements. Such persons include private landowners, grazers, ranchers, farmers or their contractors, federal land managers, and State or local agencies or fire districts that perform prescribed burning on public or private lands.

Just as importantly, these proposed Guidelines are intended to beneficially impact those people who live in areas that would be potentially exposed to high concentrations of smoke from open burning used in agricultural operations and prescribed burning.

How do proposed changes to the Guidelines change current agricultural burning procedures carried out by the State and local air districts?

The proposed Guidelines are not expected to change existing requirements and procedures that regulate open burning from agricultural operations. However, we do expect several districts to take on additional oversight responsibilities associated with the increased amount of prescribed burning on federal lands. In order to maintain a cohesive, collaborative and cost-effective process in carrying out the multiple layers of authorities and requirements governing agricultural burning, including prescribed burning, the proposed changes to the Guidelines establish a systems-based approach that relies on planning and analysis, evaluation and tracking, notification, and consultation.

Planning and analysis

The proposed Guidelines call for the creation of a burn authorization system in which districts would regulate the amount, timing, and location of burn events in order to minimize smoke impacts to smoke sensitive areas, avoid cumulative smoke impacts, and prevent public nuisances. As part of this system, the local air districts would

coordinate the scheduling of prescribed burn projects in their districts with the system that exists for agricultural burning.

Prescribed burners would be expected to tailor their smoke management plans for individual burn projects to provide the affected local air district(s) with the information needed to evaluate, coordinate and approve the timing and size of the burn, or alternative non-burn treatments. The local air districts should receive sufficient information to evaluate the potential impacts of alternative treatments and assure that air quality concerns are adequately addressed in the public lands environmental assessment and burn plan.

Evaluation and tracking

The ARB has worked closely with the U.S. Forest Service and other interested stakeholders to develop a computerized reporting system that will track prescribed fires in the State. Once the system is in operation, the burn agency would enter all pertinent information about the burn project, allowing the ARB and local air district to access the data and issue the authorization to burn.

Through the application of continued monitoring, both modeled and in the field, data tracking will provide both air agencies and burners with better information with which to decide the amounts and timing for prescribed burns. It can also improve the decision making process by allowing for an evaluation of different types of treatment that best meet vegetation management and hazard reduction objectives that are also protective of public health.

Notification and consultation

The ARB and local air districts evaluate smoke impacts and air quality trends attributable to fires to determine what actions should be taken to minimize emissions and mitigate air quality impacts. This responsibility imposes special requirements both upon the air agencies as well as those authorized to conduct the burning. Under the proposed Guidelines, the ARB, upon request, must notify burners of the 2, 3, and 4 day outlook of weather conditions that could impact whether or not to burn. The local air districts must notify and consult with neighboring districts or states any time that smoke impacts are likely to create cross-jurisdictional smoke impacts.

Prescribed burners must also comply with local air district public notification procedures to ensure that their actions are coordinated and in compliance with local air district and State regulations, and that the public is duly notified, both prior to and at the time of the burn. When a wildfire occurs on a no burn day, the burner must notify and consult with the ARB and applicable local air district to determine if any air quality impacts would result from allowing the fire to proceed. The burner must also work with its local air district and the ARB whenever smoke from a burn event is likely to cross jurisdictional boundaries.

Will local air districts have the authority to declare burn days for their areas?

Under State law, the ARB is authorized to declare no burn days when agricultural burning is prohibited within each air basin. However, several local air districts currently assist and supplement ARB's work when forecasting meteorological conditions at the sub-regional level within each air basin. We believe that local air districts should be allowed to refine State-derived forecasts and burn day determinations provided they can do so within the context of a State-approved district smoke management program, and demonstrate the resources and staffing adequate to take on the additional responsibilities. We are currently evaluating the legal authority and mechanisms available to delegate this authority and may propose additional amendments to the Guidelines.

What are the anticipated increases in prescribed burning on federal lands?

In regard to prescribed burning, many State and federal agencies indicate that they would like to increase their levels of burning; however, their efforts are limited to available funding. Therefore, the potential increases in prescribed burning from these sources are uncertain at this time. However, we expect that prescribed burning will increase in the coming years as there are significant economic and ecological incentives to do so.

According to the U.S. Forest Service, 39 million acres on national forests in the interior West are at high risk of catastrophic wildfire. The Forest Service currently treats about 100,000 acres per year in California to reduce fire hazard and achieve other resource benefits. Based on 1999 projections and communications with the Forest Service, it appears that the majority (about 90 percent) of that treatment is through prescribed burning, with the remainder treated mechanically (e.g., chipping, cultivation, mowing, selective logging, and removal). The agency has plans to increase these treatments to 220,000 acres by the year 2005, with 158,000 acres treated using prescribed burning and the remainder treated using mechanical means. The U.S. Bureau of Land Management burned 15,000 acres in 1998, and would like to increase this to 45,000 acres by 2003. The National Park Service has had an active program on prescribed burning for several years, and therefore plans on only minimal increases in burning by 2003.

Prescribed burning by the California Department of Forestry and Fire Protection (CDF) is conducted under their Vegetation Management Program. Under this program, about 40,000 acres per year are burned. While CDF would like to increase the areas treated by prescribed fire, they are limited by their funding and do not predict dramatic increases in the near future. The California Department of Parks and Recreation expects to double current burning levels to 5,500 acres in 2003.

Will the regulation reduce incidents of catastrophic wildfires?

California wildlands are at high risk of catastrophic wildfires. In 1999 alone, wildfires consumed over 600,000 acres on federal and State lands in California, while less than 90,000 acres were a result of prescribed fires.

Federal and State land managers have developed long range plans to reduce this risk through the use of prescribed burning and alternative non-burn treatments for planned wildland fires, as well as contingency plans that would go into effect in the event of an unanticipated wildfire. The proposed Guidelines are intended to reconcile the increased use of prescribed burning that will be undertaken over the next several years with health-related air quality standards. While the Guidelines may not directly reduce incidents of wildfires in the short term, we anticipate that Guidelines will affect how wildfires are managed to account for health-related smoke impacts and how land managers work with affected local air districts using a more collaborative approach. Overall, we anticipate that these improvements in the fire and smoke management processes will reduce excessive forest fuel levels and associated catastrophic wildfires, while minimizing adverse impacts to public health.

Will the State smoke management program eliminate prescribed burning in favor of non-burn alternatives?

The proposed Guidelines calls for local air districts to develop a burn authorization system that recognizes priorities and appropriate treatment methods for open burning used in agricultural operations and prescribed burning that can be used to minimize smoke related emissions. Determining the right mix of alternatives should be decided in conjunction with key stakeholders in each region. Such a mix should utilize the optimum combination of treatments or factors such as weather, wildfire prevention, or pre-fire treatments that would best reduce the need for, or the smoke impacts of, fire to smoke sensitive areas. For instance, some land may be too remote or terrain too steep, or vegetation too invasive, to undertake anything short of fire. On the other hand, prescribed fires in wildlife habitat, riparian ecosystems, or proximity to interface areas or frequently traveled roads and campgrounds may pose unacceptable consequences.

Will implementation of the Guidelines result in fewer burn days?

No. Even today, the existing Guidelines recognize that some days may not allow any burning (no burn days). Those conditions will continue to exist. However, the revised Guidelines introduce the concept of "marginal" burn days that would allow small amounts of burning where it is determined that burns in small quantities in certain portions of a region would result in negligible air quality impacts to occur in areas that would not adversely affect smoke sensitive areas.

Why are additional requirements being imposed on prescribed burners?

Additional requirements for prescribed burners are necessary to minimize the public health impacts of prescribed burns. These requirements are particularly important in light of anticipated increases in prescribed burning over the next several years.

Prescribed burns are often multi-day events; the fuel loading is very heavy, resulting in high particulate matter emissions; the fuels are often heterogeneous, burn unevenly and continue to smolder; and have the potential to become uncontrolled. For these reasons, this type of burning is more unpredictable and can result in extremely high levels of particulate matter for extended periods. Crop waste burning, on the other hand, is characterized by lighter fuel loading; burns that are well-contained and concluded in a few hours; and homogeneous, well-dried fuels.

The new requirements for prescribed burners would specify that all planned burn projects be annually registered with the local air district. This would include areas where naturally-ignited fires (for example, those occurring as a result of lightning strikes) may be managed for resource benefits through allowing an unplanned fire to continue unsuppressed. Any of these fires that occur on no burn days would be required to submit smoke management plans within 72 hours of discovering the fire. Additionally, we are proposing to establish plan and oversight requirements for prescribed burns that consist of three tiers of complexity for smoke management plans. Those conducting smaller burns, with less potential for adverse impacts, would be required to submit to their local air district or region only a minimal amount of information. Those conducting larger burns, or burn events expected to continue overnight or for multiple days, would be required to submit more detailed information. Those conducting any prescribed burn must work within the local air district or region's burn authorization system. However, smoke management plans would be required for larger burn events.

Will changes in the proposed Guidelines result in additional implementation and compliance costs?

The ARB identified the following financial and economic impacts of the proposed changes on the private sector as well as State and local air and fire agencies.

In our analysis, we assumed that the existing Guidelines would not change requirements governing open burning used in agricultural or grazing operations and therefore identified no additional costs for these activities.

In our analysis, we assumed that the proposed Guidelines would require registration, smoke management plans, and reporting of prescribed burns that are conducted by private owners and contractors on private and commercial forest lands. This could impose additional requirements on industrial forest landowners (40-50), potentially some non-industrial forest landowners of 40 acres or more who choose to conduct their own burning, licensed timber operators, private forest fuel management contractors, and those ranchers and farmers that derive part of their revenue stream from the management and sale of timber. These impacts would primarily be felt in those portions

of northern California that rely on timber harvesting, but other portions of the State that derive a portion of their revenues from timber sales could also experience some cost impacts. Private grazing land owners may also experience additional permit fees if local fire districts that conduct prescribed burns for these lands decide to pass along additional costs to comply with the State regulation.

Based on discussions with the California Forestry Association, we estimated that any additional costs would be spent on burn plan analysis, documentation, reporting requirements, and local permit fees. The Forestry Association assumed that each year, approximately 25,000 acres of industrial forest lands and 7,000 acres of non-industrial forest lands would require a burn permit. These costs were estimated to run about \$15 per acre and would not include the additional costs associated with potential delays or cancellations from declaring a no burn day on the day of the burn, which would have affected the industry even under the existing Guidelines. Assuming an annual private land burn program of 32,000 acres, the total cost to forest landowners could amount to \$480,000 per year.

In consultation with several local air districts, we estimated additional expenditures of approximately \$1 million per year to participating local air districts in California. These costs were on top of costs to comply with existing State agricultural burning requirements and attributable to increased coordination and oversight responsibilities necessary to track the anticipated increases in prescribed burning. The estimates varied from region to region; those whose oversight responsibilities would continue to remain with agricultural operations, estimated small increases, while local air districts that needed to incorporate additional requirements to account for prescribed burning and enhanced forecasting tools estimated significant increases.

As provided by State law, local air district permit review costs resulting from compliance with State requirements are normally recoverable by fees that are within the local air district's authority to assess and would be borne by sources that engage in agricultural burning activities that fall within the district's regulatory authority (i.e., private land owners and federal land managers). Therefore, any additional administrative costs resulting from a district's existing or expanded program could be incurred at the district's initiative and financed through fees borne by participating permitted sources.

Nevertheless, the State is aware of the increasing financial burden that State requirements may impose on local government and that the existing agricultural burning program in several local air districts is not self-sustaining. For these reasons, the ARB will work with the local air districts to find ways to elicit cost savings without sacrificing health-related benefits of the program. One way is to achieve closer cooperation, perhaps through memoranda of understanding, between State and local air agencies, federal land managers, commercial timber owners and local governments. Such agreements would establish formal working partnerships that reinforce the mutual goals contributing to forest and public health and reduce duplicated efforts. Currently we are working with the districts and the U.S. Forest Service to install an interactive computer-based system to track prescribed fires in the State. This automated system should help

to reduce the costs currently needed to plot and estimate the impacts of planned and actual burns to determine if additional projects can be safely authorized. In addition, we plan on working with our federal partners to identify areas of cost-sharing and in-kind services in which federal fuels management and smoke management expertise can be utilized as part of the collaborative approach that the State Guidelines envision.

In at least one county, local fire districts perform the dual duties of permit agencies and prescribed burners; in this situation, there may be some additional costs associated with burn plan monitoring and reporting requirements contained in the State rule. However, the proposed amendments do allow local air districts to specify different burn plan thresholds provided they can demonstrate equivalent outcomes, i.e., reduced or avoided smoke impacts to the affected public and appropriate public notification procedures. Such flexibility should keep overall costs to current or otherwise acceptable levels. In the unlikely event of cost overruns directly associated with State regulatory compliance, we will continue work with affected local air and fire districts to address the problem.

The proposed changes to the Guidelines also affects the California Department of Forestry and Fire Protection (CDF), by requiring all designated fire agencies to prepare smoke management plans for local air district review prior to prescribed burning. Interaction between the local air districts and the CDF should not incur additional State costs as CDF believes its program to be functionally equivalent to that required by the proposed regulation.

Expected increases in prescribed burning over the next several years will also require additional ARB resources to exercise adequate oversight. These resources have already been identified in the annual budget for 2001. Beyond these resources, it is not expected that additional direct costs would be incurred by the ARB because this regulation does not impose additional requirements upon the ARB. Interaction between the local air districts and the ARB should be within the normal course of activity and not require additional resources by the State beyond that already identified for 2001.